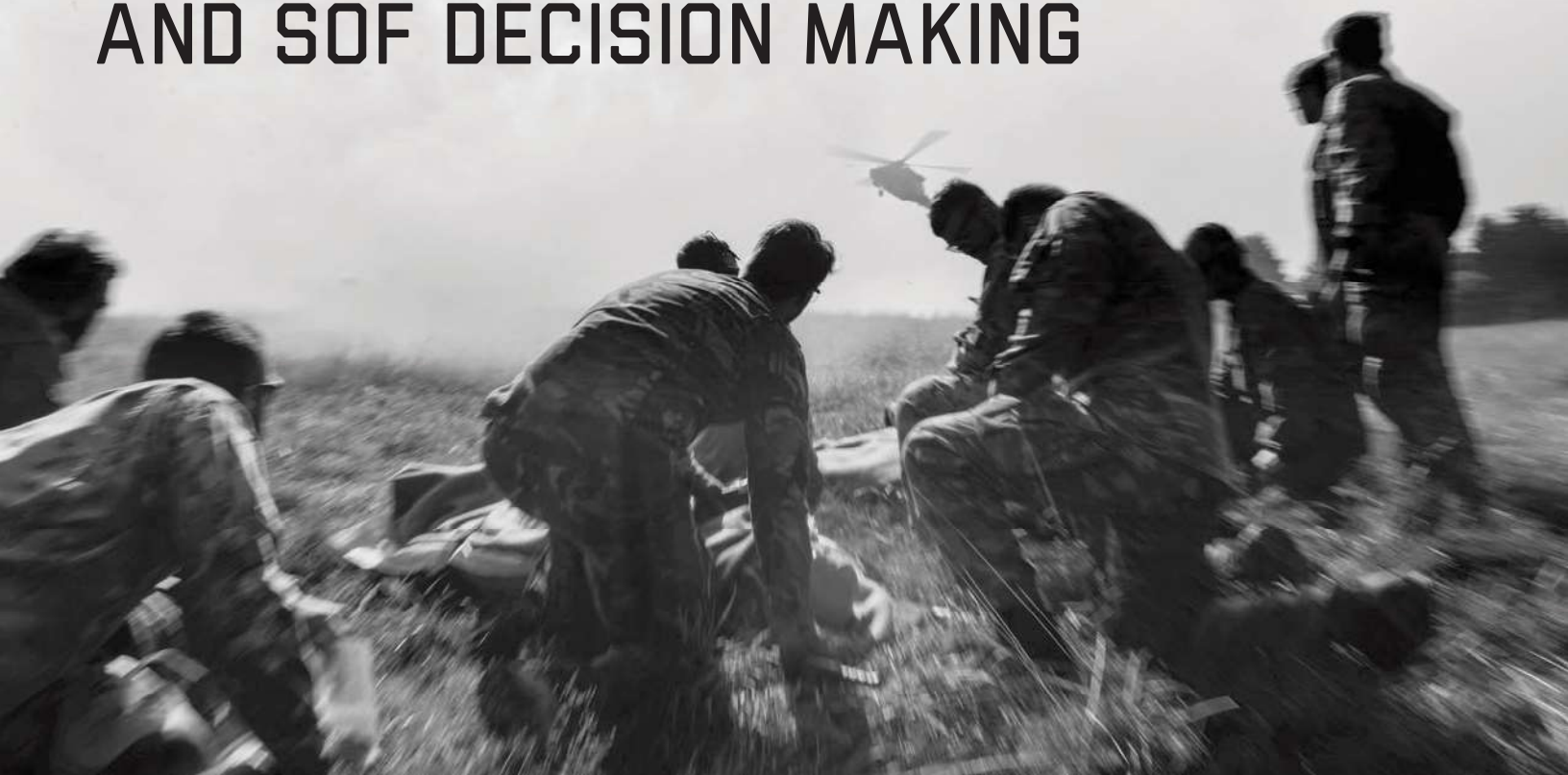


# CRITICAL THINKING AND SOF DECISION MAKING



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BY SERGEANT MAJOR ROBERT J. BURTON

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## CRITICAL THINKING AND SOF DECISION MAKING

Special Operations Soldiers thrive in complexity and anticipate adversary actions, methods and tactics, techniques and procedures through an in-depth understanding of the geopolitical environment. To predict a changing environment requires a high degree of critical thinking and an adaptive approach to problem solving. Gen. Martin E. Dempsey stated in an interview "We assert that strategic leaders must be inquisitive and open-minded. They must be able to think critically and be capable of developing creative solutions to complex problems. They must be historically minded; that is, they must be able to see and articulate issues in historical context."<sup>01</sup> Gen. Dempsey also said "with mental agility, successful strategic leaders scan their environments, think critically, and lead and manage change across large, complex organizations." The military stresses the importance of continuous learning through campaigns of learning and through emphasizing life-long learning concepts.

## SOF AND THE INTELLECTUAL STANDARDS

SOF must apply the Intellectual Standards to ensure that our reasoning and decision making takes into account all relevant information and that we communicate effective solutions to complex problems. Application of the intellectual standards (clarity, accuracy, precision, relevance, depth, breadth, logic, significance and fairness) provides a framework that we hang information on or filter to determine relevancy and validity. Speed, autonomy, mission command and trust allow warfighters to process information much quicker and facilitate a rapid decision making process. Operational decisions are made in a compressed decision cycle and operators are pushed to the edge with the rapid pace of an evolving battlefield. This is increasingly evident as we face Gray Zone challenges and competitive interactions among state and non-state actors where on-the-ground decisions impact strategic decisions. The battlefield process of taking information, analyzing it and making decisions is similar to more extensive processes such as the Military Decision Making Process.

01  
Special Operations Soldiers from various nations participate in a training exercise at the International Special Training Centre in Pfullendorf, Germany. SOF operators must be capable of thinking critically and be capable of developing creative solutions to complex problems. U.S. ARMY PHOTO BY JASON JOHNSTON

## TRUST BUT VERIFY

When working with other nations, we need to trust but verify the information that we receive and conduct analysis to determine whether things are or are not as they appear to be. Critical thinking must become second nature and requires practice to hone an analytical mindset so we can see details as they relate to the big picture. Thinking as a way of understanding the environment can be done through strategic, creative, and critical thinking to gain an appreciation for information. Strategic thinking envisions the ideal future, end state or outcome based upon action or lack of action. Creative thinking finds unconventional ways to elevate the tactical and operational options toward an objective. Critical thinking assesses the practical ramifications of information and helps to separate the facts from opinion, bias from truth.

## CRITICAL THINKING

According to the Foundation for Critical Thinking, 2007, "we use concepts, ideas and theories to interpret data, facts, and experiences to answer questions, solve problems, and resolve issues."<sup>02</sup> Each SOF Soldier must be able to break critical thinking down into its parts of the Elements of Thought and the Intellectual Standards when making decisions. We make decisions every day and the more complex the problem, the more we need to break it down into parts that can be researched, analyzed and communicated.

Paul and Elder state that "there are two essential dimensions of thinking that students need to master to learn how to upgrade their thinking. They need to be able to identify the "parts" of their thinking, and they need to be able to assess their use of these elements of thought."<sup>03</sup> In writing and communication, we seek to break down the information into smaller components and then apply the intellectual standards to assess the information. All reasoning leads somewhere and has implications and consequences, and it is the SOF operator's responsibility to gather all of the information and validate that information before making decisions.

## CRITICAL THINKING SKILLS IN PME

A finding in the RAND study *Enhancing Critical Thinking Skills for Army Leaders Using Blended-Learning Methods* they concluded that learners require face-to-face interaction to learn complex material.<sup>04</sup> Certain information is best taught in an academic setting where students can learn from each other and ask questions while the information is fresh in their mind. Students are still anchoring or linking the new knowledge to old knowledge and developing understanding. The instructor or facilitator challenges the students to think critically and points students to primary academic sources. The instructor employs the intellectual standards, elements of thought and Bloom's taxonomy in their questioning to bring students to a

higher cognitive understanding. Students in PME are challenged to think more critically and gain valuable experience in applying critical thinking to solve complex problems.

## CRITICAL THINKING AND THE IDMP

Why does a Soldier make a decision that will ruin his career? Is his decision reflexive based on emotion, perception, bias or other motivation? The natural reflexive process of decision making must be replaced with a deliberate, reflective process. A reflective process is necessary that is as rapid as its reflexive counterpart and provides an individual decision-making process or IDMP. To take over any automatic thought processes that may be influenced by emotion, bias or other natural human filters, (every decision we will make) we have to STOP-THINK-ACT. The IDMP provides the decision space necessary to step back from the problem and see it from a critical perspective. The IDMP can be broken down into its parts in the acronym SMELL-L: S - Safe, M - Moral, E - Ethical, L - Legal, L - Logical, and L - Lasting (second and third order effects). If we have a mechanism or warning light to stop and think for a moment, we can instantaneously redirect our cognitive process and engage the prefrontal cortex in making reflective decisions. The operator must think, is this the best decision with the information and time provided? Because no one wants a decision that stinks so apply SMELL-L!

The IDMP and SMELL-L will help the Soldier make the most informed on the spot decision. Reflexive decision making is done in the "heat of the moment"

Figure 01  
The Elements of Thought.

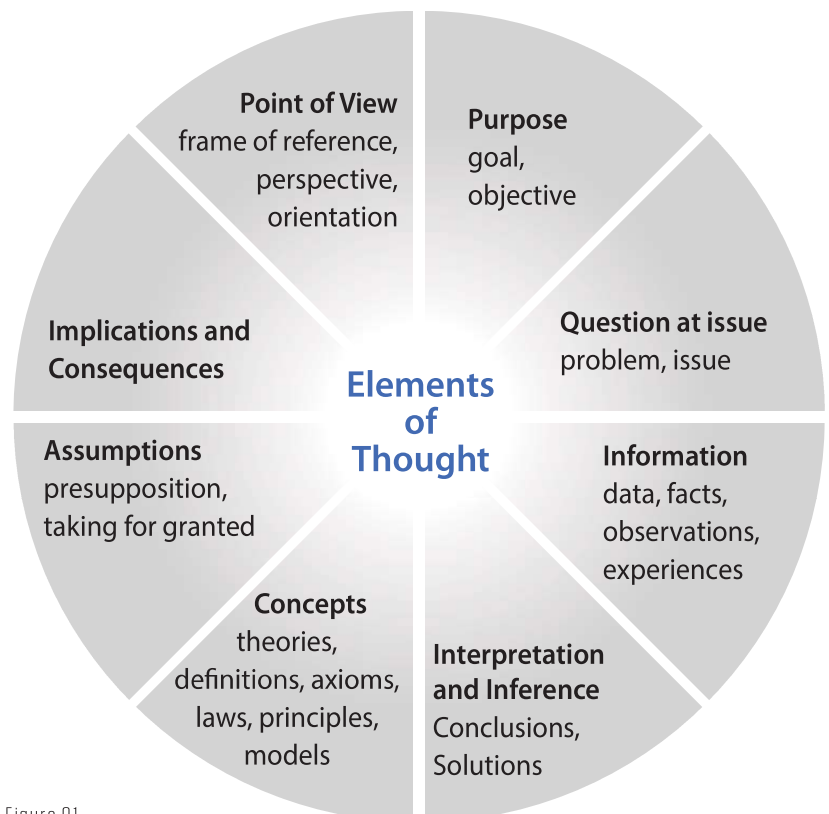


Figure 01

while reflective decision making applies a holistic approach to problem solving and decision making to improve the outcome. SMELL-L helps us to STOP and THINK before we ACT and helps the Soldier transition from the reflexive to the reflective frame of mind to engage the prefrontal cortex in raising thinking to a higher level of quality and making a "good decision."

## THE PREFRONTAL CORTEX AND THE IDMP

According to Funahashi and Andreau, 2013, "The prefrontal cortex is one of the last regions of the brain to reach maturation. This delay may help to explain why some adolescents act the way they do."<sup>05</sup> Funahashi and Andreau, 2013 continue "the so-called "executive functions" of the human prefrontal cortex include: focusing attention, organizing thoughts and problem solving, foreseeing and weighing possible consequences of behavior, considering the future and making predictions, forming strategies and planning, ability to balance short-term rewards with long term goals, shifting/adjusting behavior when situations change, impulse control and delaying gratification, modulation of intense emotions, inhibiting inappropriate behavior and initiating appropriate action, and simultaneously considering multiple streams of information when faced with complex and challenging information."

## CRITICAL THINKING AND LEADERSHIP - START WITH WHY AND KEEP THE END IN MIND

Think "big picture" and consider the impact of the decision on the tactical and operational plan and any strategic impact. It is critical that leaders communi-

cate the vision of the commander one and two levels higher to help Soldiers remember that their actions either support or negate the commander's priority efforts. Few set out on a mission or in a decision to fail and to deliberately make the wrong choices. However, by not anchoring our thinking and filtering our actions through a deliberate, reflective process we will not consider all of the necessary information prior to making decisions.

## LEADERSHIP 101

Getting to know our Soldiers is critical and understanding what motivates them to action and success. Do they possess a high intrinsic or internal drive or are they externally motivated by recognition or other external factors? Knowing these motivations and identifying their potential to impact decision making is reason enough to counsel and spend time with them. When we get to know the values that a person builds their life upon and how they perceive reality, we can identify potential obstacles or damaging beliefs that drive a person more toward the reflexive and not reflective process for decision making.

We will soon realize that each individual is unique with their personality, learning style and behavioral style. Only when the leader takes the time to know their people can we then influence them through providing purpose, direction and motivation. Influence must be done in a way that relates to other's experiences, values and beliefs and is built upon common ground. Leader intervention is necessary to identify patterns of illogical behavior in our Soldiers and harmful patterns in their decision making and INTERVENE. Engaged leaders who are self-aware will develop other leaders who are self-aware and aware of how they interact with their environment and others. We all take in and process information based on personality, learning style and behavioral style so it is important to know where we are and to know ourselves first. Leaders who understand how to apply the IDMP are leaders who can influence Soldiers to make right decisions when faced with danger or difficult ethical situations.

## CRITICAL THINKING AND REALISTIC TRAINING

Getting to know people we can identify motivations, personality and trends of behavior and predict the types of decisions people will make under pressure. That is why STX lanes or simulated training exercises are critical to providing realistic training events that stimulate the senses and emotions. It is important to put our Soldiers in these realistic situations to inoculate them from fear and to help them transition from reflexive thinking to reflective thinking. The engagement of the prefrontal cortex during realistic training helps elevate the level of decision making under stressful conditions.

Figure 02  
The Individual Decision Making Process using the SMELL-L to make decisions.

### INDIVIDUAL DECISION MAKING PROCESS (IDMP)

The IDMP takes over any automatic thought processes that may be influenced by emotion, bias or other natural human filters and provides the decision space necessary to step back from a problem and see it from a critical perspective using the SMELL-L method.

DOES IT  
PASS THE  
SMELL-L  
TEST?

- S** Safe
- M** Moral
- E** Ethical
- L** Legal
- L** Logical
- L** Lasting (2nd/3rd order effects)

*SMELL-L helps us to STOP and THINK before we ACT and helps the Soldier transition from the reflexive to the reflective frame of mind to raise thinking to a higher level of quality to make a good decision.*



Realistic training exposes Soldiers to situations where the body creates the stress hormone cortisol as a survival instinct or "fight or flight" release of adrenaline. The amygdala as small as it is has a major role in our automatic response mechanisms but sometimes we need to run toward the sound of gunfire and not away. The counter or override to the "fight or flight" mechanism is the transition from reflexive to reflective decision making. Many Soldiers have said that the "training just kicked in" and their experiential foundation helped them helped them to survive.

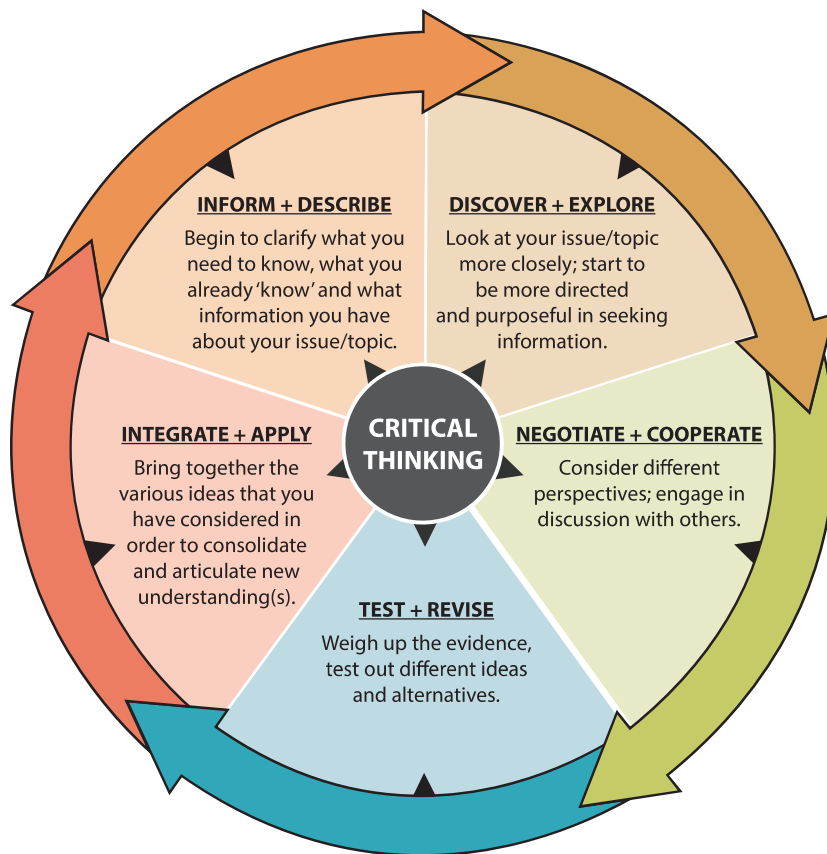
## CRITICAL THINKING AND THE COMMANDER'S VISION

Leaders must clearly communicate the commander's intent through purpose, key tasks and end state and empower subordinate leaders to make decentralized decisions with an understanding of how the commander sees the situation or mission. Leaders must begin with why to help Soldiers anchor the commander's vision to their decision making process. Therefore, a vision that is poorly communicated leaves the outcome up to chance or the decision making to the decentralized element and their understanding of the situation and success factors.

SOF conducts mission brief backs, not only to gain approval for a mission but to demonstrate that the element has done analysis and contingency planning of all mission factors that lead to success as articulated by the approving commander. Mission Analysis is the application of critical thinking and helps the planning team to apply the intellectual standards and the elements of thought to the information given to develop courses of action. Specified and implied tasks are extracted from orders through critical thinking, experience, and a shared understanding of the mission. The application of critical thinking and reasoning must be practiced and deliberate and those who do practice "thinking" make better analysts, planners, or strategists than others.

## CONCLUSION

We base decisions to commit our nation's blood and treasure to an understanding of the environment and the application of the elements of national power. We must ensure that we employ critical




thinking to cultivate the "right information" to base tactical to strategic decisions. Critical thinking is not a natural process; therefore, we must exercise critical thinking by employing the intellectual standards for every decision until it becomes second nature. Critical thinking requires knowing what questions to ask to get the information that we need to make the best decisions. MDMP provides a process to take information and conduct analysis to gain an understanding of a military situation and with the commander's vision, we will execute sound courses of action. We require a similar process at the individual level such as the IDMP to rapidly process information and make good decisions at the Soldier level. Stop and SMELL-L the operating environment decision by decision, moment by moment to make the hard right decisions every day! 

Figure 03  
The Critical Thinking process.

## ABOUT THE AUTHOR

Sgt. Maj. Robert J. Burton is a Special Forces NCO who wrote this paper while attending the Joint Special Operations University Enlisted Academy.

**NOTES** 01. Armed Forces Journal. (2011). *Building critical thinkers*. Retrieved from <http://armedforcesjournal.com/building-critical-thinkers>. 02. Foundation for Critical Thinking. (2007). *Online Model for learning the Elements and Standards of Critical Thinking*. Retrieved from <https://www.criticalthinking.org/ctmodel/logic-model1.htm>. 03. Paul, R. and Elder, L. (2015). *The Elements of Reasoning and the Intellectual Standards*, "Helping Students Assess Their Thinking." Retrieved from <http://www.criticalthinking.org/pages/the-elements-of-reasoning-and-the-intellectual-standards/480>. 04. Straus, S., et al., (2013). *Enhancing Critical Thinking Skills for Army Leaders Using Blended-Learning Methods*. Retrieved from [http://www.rand.org/pubs/research\\_reports/RR172.html](http://www.rand.org/pubs/research_reports/RR172.html). 05. Funahashi, S., & Andreau, J. M. (2013). *Prefrontal cortex and neural mechanisms of executive function*. *Journal Of Physiology* (09284257), 107(6), 471-482. doi:10.1016/j.jphysparis.2013.05.001. Retrieved from [http://r.search.yahoo.com/\\_ylt=A0LEV7iKorIXGwgAVf4nnlIQ;\\_ylu=X3oDMTBdYdWNmY2MwBGNvbG8DYmYxBHBvcwMOBHZ0aWQDBHNIYwNzcg-/RV=2/RE=1472074443/RO=10/RU=http%3a%2f%2frepository.kulib.kyoto-u.ac.jp%2fdspace%2fbtstream%2f2433%2f179793%2f1%2fj.jphysparis.2013.05.001.pdf/RK=0/RS=kZF0DBJ61DzrUezu9LQxkijA894-](http://r.search.yahoo.com/_ylt=A0LEV7iKorIXGwgAVf4nnlIQ;_ylu=X3oDMTBdYdWNmY2MwBGNvbG8DYmYxBHBvcwMOBHZ0aWQDBHNIYwNzcg-/RV=2/RE=1472074443/RO=10/RU=http%3a%2f%2frepository.kulib.kyoto-u.ac.jp%2fdspace%2fbtstream%2f2433%2f179793%2f1%2fj.jphysparis.2013.05.001.pdf/RK=0/RS=kZF0DBJ61DzrUezu9LQxkijA894-).